In response to that Office Action, please amend the above-identified

application as follows:

IN THE CLAIMS:

Please cancel Claims 117, 130, 167, 180, 193, 194, 205 and 206 without

prejudice or disclaimer of the subject matter presented therein.

Please amend Claims 42, 43, 55, 64-66, 100, 101, 131, 132, 164-166, 168,

169, 172, 173, 175-179, 181, 182, 185-192, 195, 196, 201-204, 207, 208, 210-213, 235,

236, 239 and 244-246, and add Claims 249-251 to read as follows. A marked-up copy of

the amended claims, showing the changes made thereto, is appended.

42.   (Amended) A storage medium storing instructions for causing a

programmable processing apparatus to become operable to perform a method according to

any of claims 1, 21 and 22.

43.   (Amended) A signal conveying instructions for causing a

programmable processing apparatus to become operable to perform a method according to

any of claims 1, 21 and 22.

55.   (Amended) A method of generating a model of an object in a three-

dimensional computer model, in which:

a transformation is applied to image data from a first camera relating to the

object and its shadow which maps the image data to a surface to give first transformed

image data;

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a transformation is applied to image data from a second camera relating to the object and its shadow which maps the image data to the surface to give second transformed image data;

the first transformed image data and the second transformed image data are compared to distinguish transformed image data relating to the object from transformed image data relating to its shadow; and

the object is modelled in dependence upon the transformed image data relating to the object.

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64.   (Amended) Apparatus for generating a model of an object in a three-dimensional computer model, comprising:

means for applying a transformation to image data from a first camera relating to the object and its shadow which maps the image data to a surface to give first transformed image data;

means for applying a transformation to image data from a second camera relating to the object and its shadow which maps the image data to the surface to give second transformed image data;

means for comparing the first transformed image data and the second transformed image data to distinguish transformed image data relating to the object from transformed image data relating to its shadow; and

means for modelling the object in dependence upon the transformed image data relating to the object.

65. (Amended) A storage medium storing instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 44, 54 and 55.

66. (Amended) A signal conveying instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 44, 54 and 55.

100. (Amended) A storage medium storing instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 67 and 84.

101. (Amended) A signal conveying instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 67 and 84.

131. (Amended) A storage medium storing instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 102 and 116.

132. (Amended) A signal conveying instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 102 and 116.

164. (Amended) A storage medium storing instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 133 and 149.

165. (Amended) A signal conveying instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 133 and 149.

166. (Amended) A method of processing image data defining a sequence of images of at least one object moving in a scene to produce signals defining a representation of each object in a three-dimensional computer model, and to generate image data by rendering an image of the three-dimensional computer model in accordance with a user-selected viewing direction, the method comprising:

processing the image data to identify image data relating to respective objects in the scene;

defining a representation of each object in the three-dimensional computer model in dependence upon the identified image data;

generating image data by rendering an image of the three-dimensional computer model in accordance with a user-selected viewing direction in which texture data based on the identified image data is rendered onto the object representations; and

generating reliability information indicating the reliability of the image data in dependence upon the angle between the user-selected viewing direction and the viewing direction from which the input image data was recorded.

168. (Amended) A method according to claim 166, wherein the information indicating the reliability is generated in dependence upon a linear relationship between reliability and the angular difference between the user-selected viewing direction and the viewing direction from which the input image data was recorded.

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169. (Amended) A method according to claim 166, further comprising the step of generating information indicating how to change the viewing direction to improve the generated reliability.

172. (Amended) A method according to claim 166, wherein the reliability information is generated as pixel data within the generated image data.

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173. (Amended) A method according to claims 166, further comprising the step of generating a signal conveying the image data and the reliability information.

175. (Amended) A method according to claim 166, further comprising the step of displaying an image using the generated image data and displaying the reliability information.

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176. (Amended) A method according to claim 166, further comprising the step of making a recording of the image data and the reliability information either directly or indirectly.

177.   (Amended) A method of rendering an image in accordance with a user-selected viewing direction of a three-dimensional computer model comprising a representation and associated texture data for at least one object, the texture data being derived from image data recorded by at least one camera, the method comprising:

generating image data by rendering an image of the three-dimensional computer model in accordance with a user-selected viewing direction, in which the texture data is rendered onto each representation; and

generating reliability information indicating the reliability of the image data in dependence upon the angle between the user-selected viewing direction and the viewing direction from which the input image data was recorded.

178.   (Amended) An image processing method in which object data defining a three-dimensional computer model of at least one object in a scene is rendered in accordance with a user-selected viewing direction using image data recorded by a camera having a viewing direction to render each object, and an indicator of a quality of the generated image data is produced for output to the user in dependence upon the angle between the user-selected viewing direction and the viewing direction of the camera.

179.   (Amended) Apparatus for processing image data defining a sequence of images of at least one object moving in a scene to produce signals defining a representation of each object in a three-dimensional computer model, and to generate image data by rendering an image of the three-dimensional computer model in accordance with a user-selected viewing direction, the apparatus comprising:

means for processing the image data to identify image data relating to respective objects in the scene;

means for defining a representation of each object in the three-dimensional computer model in dependence upon the identified image data;

means for generating image data by rendering an image of the three-dimensional computer model in accordance with a user-selected viewing direction in which texture data based on the identified image data is rendered onto the object representations; and

means for generating reliability information indicating the reliability of the image data in dependence upon the angle between the user-selected viewing direction and the viewing direction from which the input image data was recorded.

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181.   (Amended) Apparatus according to claim 179, operable to perform processing such that the information indicating the reliability is generated in dependence upon a linear relationship between reliability and the angular difference between the user-selected viewing direction and the viewing direction from which the input image data was recorded.

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182.   (Amended) Apparatus according to claim 179, further comprising means for generating information indicating how to change the viewing direction to improve the generated reliability.

185.   (Amended) Apparatus according to claim 179, operable to perform processing such that the reliability information is generated as pixel data within the generated image data.

186.   (Amended) Apparatus according to claim 179, further comprising means for displaying an image using the generated image data and displaying the reliability information.

187.   (Amended) Apparatus for rendering an image in accordance with a user-selected viewing direction of a three-dimensional computer model comprising a representation and associated texture data for at least one object, the texture data being derived from image data recorded by at least one camera, the apparatus comprising:

means for generating image data by rendering an image of the three-dimensional computer model in accordance with a user-selected viewing direction, in which the texture data is rendered onto each representation; and

means for generating reliability information indicating the reliability of the image data in dependence upon the angle between the user-selected viewing direction and the viewing direction from which the input image data was recorded.

188.   (Amended) An image processing apparatus operable to render object data defining a three-dimensional computer model of at least one object in a scene in accordance with a user-selected viewing direction using image data recorded by a camera having a viewing direction to render each object, and operable to produce an indicator of a

quality of the generated image data for output to the user in dependence upon the angle between the user-selected viewing direction and the viewing direction of the camera.

189.   (Amended) A storage medium storing instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 166, 177 and 178.

190.   (Amended) A signal conveying instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 166, 177 and 178.

191.   (Amended) A method of processing image data defining a plurality of sequences of images, each from a respective camera, of an object moving in a scene to produce signals defining a representation of the object in a three-dimensional computer model, and to generate image data by rendering an image of the three-dimensional computer model in accordance with a user-selected viewing direction, the method comprising:

receiving data defining a user-selected viewing direction;

calculating the respective angle between the user-selected viewing direction and the respective viewing direction of each camera;

identifying the cameras having a viewing direction within a predetermined angle of the user-selected viewing direction as identified cameras;

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comparing at least one camera characteristic affecting image data quality

for each identified camera to determine differences therebetween;

selecting one of the identified cameras as a selected camera in dependence

upon the determined differences;

processing input image data from the selected camera to define a

representation of the object in the three-dimensional computer model; and

generating image data by rendering an image of the three-dimensional

β 11 computer model in accordance with the user-selected viewing direction, in which texture

data based on input image data from the selected camera is rendered onto the

representation of the object.

192.   (Amended) A method according to claim 191 or claim 249, wherein,

when comparing at least one camera characteristic affecting image data quality, at least

one of the following are compared: the methods of transferring the image data from

respective cameras; the resolution of respective cameras; the shutter speed of respective

cameras; the stability of the image data from respective cameras; and whether the image

data from respective cameras is colour or black and white.

195.   (Amended) A method according to claim 191 or claim 249, wherein

a plurality of camera characteristics affecting image quality are compared.

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196.   (Amended) A method according to claim 195, wherein the camera

characteristics affecting quality are considered in a predetermined order and values for

each respective camera characteristic are compared, with the selection of a camera being made once the tests identify a characteristic which differs by more than a predetermined amount for given cameras.

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201.   (Amended) An image processing method in which image data from each of a respective sequence of images, each from a different camera, is processed to define a representation of at least one object in a three-dimensional computer model, and wherein a representation of each object is selected for rendering in dependence upon a user-selected viewing direction, the viewing direction of each camera and a plurality of camera parameters related to image data quality, wherein the plurality of camera parameters are tested in a predetermined order, with the selection of a representation for rendering being made once the tests identify a camera parameter which is sufficiently different for the cameras.

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202.   (Amended) An image processing method in which a user-selected viewing direction in accordance with which an image of at least one object in a three-dimensional computer model is to be rendered is used to select, from among image data defining a plurality of images of the object each recorded by a respective camera, image data to be used to define the object in the three-dimensional computer model, the selection being carried out in dependence upon the user-selected viewing direction, together with the viewing direction of each camera and a plurality of camera parameters related to image data quality, wherein the plurality of camera parameters are tested in a predetermined

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order, with the selection of image data being made once the tests identify a camera

parameter which is sufficiently different for the cameras.

203.   (Amended) An image processing apparatus for processing image

data defining a plurality of sequences of images, each from a respective camera, of an

object moving in a scene to produce signals defining a representation of the object in a

three-dimensional computer model, and to generate image data by rendering an image of

the three-dimensional computer model in accordance with a user-selected viewing

direction, the apparatus comprising:

means for receiving data defining a user-selected viewing direction;

means for calculating the respective angle between the user-selected

viewing direction and the respective viewing direction of each camera;

means for identifying the cameras having a viewing direction within a

predetermined angle of the user-selected viewing direction as identified cameras;

means for comparing at least one camera characteristic affecting image data

quality for each identified camera to determine differences therebetween;

means for selecting one of the identified cameras as a selected camera in

dependence upon the determined differences;

means for processing input image data from camera to define a the selected

representation of each] the object in the three-dimensional computer model; and

means for generating image data by rendering an image of the three-

dimensional computer model in accordance with the user-selected viewing direction, in

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which texture data based on input image data from the selected camera is rendered onto the representation of the object.

204.   (Amended) Apparatus according to claim 203 or claim 250, wherein the means for comparing at least one camera characteristic affecting image data quality is operable to compare at least one of: the methods of transferring the image data from respective cameras; the resolution of respective cameras; the shutter speed of respective cameras; the stability of the image data from respective cameras; and whether the image data from respective cameras is colour or black and white.

207.   (Amended) Apparatus according to claim 203 or claim 250, operable to perform processing to compare a plurality of respective camera characteristics affecting image quality.

208.   (Amended) Apparatus according to claim 207, operable to perform processing such that the camera characteristics affecting quality are compared in a predetermined order, with the selection of a camera being made once the tests identify a characteristic which differs by more than a predetermined amount for given cameras.

210.   (Amended) An image processing apparatus operable to process image data from each of a respective sequence of images, each from a different camera, to define a representation of at least one object in a three-dimensional computer model, and to select a representation of each object for rendering in dependence upon a user-selected

viewing direction, the viewing direction of each camera and a plurality of camera parameters related to image data quality, the apparatus being operable to test the plurality of camera parameters in a predetermined order and to select a representation for rendering when the tests identify a camera parameter which is sufficiently different for the cameras.

211. (Amended) An image processing apparatus operable to use a user-selected viewing direction in accordance with which an image of at least one object in a three-dimensional computer model is to be rendered to select, from among image data defining a plurality of images of the object each recorded by a respective camera, image data to be used to define the object in the three-dimensional computer model, the selection being carried out in dependence upon the user-selected viewing direction, together with the viewing direction of each camera and a plurality of camera parameters related to image data quality, wherein the apparatus is operable to test the plurality of camera parameters in a predetermined order and to select image data when the tests identify a camera parameter which is sufficiently different for the cameras.

212. (Amended) A storage medium storing instructions for causing a programmable processing apparatus to become operable to perform a method according to any of claims 191, 201, 202 and 249.

213. (Amended) A signal conveying instructions for causing a programmable processing apparatus become operable to perform a method according to any of claims 191, 201, 202 and 249.

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235.   (Amended) A storage medium storing instructions for causing a
programmable processing apparatus to become operable to perform a method according to
any of claims 214, 223, 224 and 225.

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236.   (Amended) A signal conveying instructions for causing a
programmable processing apparatus to become operable to perform a method according to
any of claims 214, 223, 224 and 225.

239.   (Amended) Apparatus for generating a model of an object in a three-
dimensional computer model, comprising:

an image data transformer for applying a transformation to image data from
a first camera relating to the object and its shadow which maps the image data to a surface
to give first transformed image data, and for applying a transformation to image data from
a second camera relating to the object and its shadow which maps the image data to the
surface to give second transformed image data;

a transformed image data comparer for comparing the first transformed
image data and the second transformed image data to distinguish transformed image data
relating to the object from transformed image data relating to its shadow; and

an object modeller for modelling the object in dependence upon the
transformed image data relating to the object.

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244.   (Amended) Apparatus for processing image data defining a
sequence of images of at least one object moving in a scene to produce signals defining a

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representation of each object in a three-dimensional computer model, and to generate

image data by rendering an image of the three-dimensional computer model in accordance

with a user-selected viewing direction, the apparatus comprising:

an image data identifier for processing the image data to identify image data

relating to respective objects in the scene;

an object modeller for defining a representation of each object in the three-

dimensional computer model in dependence upon the identified image data;

a renderer for generating image data by rendering an image of the three-

dimensional computer model in accordance with a user-selected viewing direction in

which texture data based on the identified image data is rendered onto the object

representations; and

a reliability information generator for generating reliability information

indicating the reliability of the image data in dependence upon the angle between the user-

selected viewing direction and the viewing direction from which the input image data was

recorded.

245.   (Amended) Apparatus for rendering an image in accordance with a

user-selected viewing direction of a three-dimensional computer model comprising a

representation and associated texture data for at least one object, the texture data being

derived from image data recorded by at least one camera, the apparatus comprising:

a renderer for generating image data by rendering an image of the three-

dimensional computer model in accordance with a user-selected viewing direction, in

which the texture data is rendered onto each representation; and

a reliability information generator for generating reliability information indicating the reliability of the image data in dependence upon the angle between the user-selected viewing direction and the viewing direction from which the input image data was recorded.

246.   (Amended) An image processing apparatus for processing image data defining a plurality of sequences of images, each from a respective camera, of an object moving in a scene to produce signals defining a representation of the object in a three-dimensional computer model, and to generate image data by rendering an image of the three-dimensional computer model in accordance with a user-selected viewing direction, the apparatus comprising:

a data receiver for receiving data defining a user-selected viewing direction;

an angle calculator operable to calculate the respective angle between the user-selected viewing direction and the respective viewing direction of each camera;

a camera identifier operable to identify the cameras having a viewing direction with a predetermined angle of the user-selected viewing direction as identified cameras;

a camera characteristic comparer operable to compare at least one camera characteristic affecting image data quality for each identified camera to determine differences therebetween;

a camera selector operable to select one of the identified cameras as a selected camera in dependence upon the determined differences;

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an object representation generator for processing input image data from

camera to define a the selected representation of the object in the three-dimensional

computer model; and

a renderer for generating image data by rendering an image of the three-

dimensional computer model in accordance with the user-selected viewing direction, in

which texture data based on input image data from the selected camera is rendered onto the

representation of each object.

--249. (New) A method of processing image data defining a plurality of

sequences of images, each from a respective camera, of an object moving in a scene to

produce signals defining a representation of the object in a three-dimensional computer

model, and to generate image data by rendering an image of the three-dimensional

computer model in accordance with a user-selected viewing direction, the method

comprising:

processing input image data from each respective camera to define a

respective representation of the object in the three-dimensional computer model;

receiving data defining a user-selected viewing direction;

calculating the respective angle between the user-selected viewing direction

and the respective viewing direction of each camera;

identifying the cameras having a viewing direction within a predetermined

angle of the user-selected viewing direction as identified cameras;

comparing at least one camera characteristic affecting the image data

quality for each identified camera to determine differences therebetween;

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selecting one of the identified cameras as a selected camera in dependence upon the determined differences;

selecting the representation of the object generated from the selected camera as a selected representation; and

generating image data by rendering an image of the three-dimensional computer model in accordance with the user-selected viewing direction, in which texture data based on input image data from the selected camera is rendered onto the selected representation of the object.

250. (New) An image processing apparatus for processing image data defining a plurality of sequences of images, each from a respective camera, of an object moving in a scene to produce signals defining a representation of the object in a three-dimensional computer model, and to generate image data by rendering an image of the three-dimensional computer model in accordance with a user-selected viewing direction, the apparatus comprising:

means for processing input image data from each respective camera to define a respective representation of the object in the three-dimensional computer model;

means for receiving data defining a user-selected viewing direction;

means for calculating the respective angle between the user-selected viewing direction and the respective viewing direction of each camera;

means for identifying the cameras having a viewing direction within a predetermined angle of the user-selected viewing direction as identified cameras;

means for comparing at least one camera characteristic affecting the image

data quality for each identified camera to determine differences therebetween;

means for selecting one of the identified cameras as a selected camera in

dependence upon the determined differences;

means for selecting the representation of the object generated from the

selected camera as a selected representation; and

means for generating image data by rendering an image of the three-

dimensional computer model in accordance with the user-selected viewing direction, in

which texture data based on input image data from the selected camera is rendered onto the

selected representation of the object.

251. (New) An image processing apparatus for processing image data

defining a plurality of sequences of images, each from a respective camera, of an object

moving in a scene to produce signals defining a representation of the object in a three-

dimensional computer model, and to generate image data by rendering an image of the

three-dimensional computer model in accordance with a user-selected viewing direction,

the apparatus comprising:

an object representation generator operable to process input image data

from each respective camera to define a respective representation of the object in the three-

dimensional computer model;

a data receiver for receiving data defining a user-selected viewing direction;

an angle calculator operable to calculating the respective angle between the

user-selected viewing direction and the respective viewing direction of each camera;